

Appendix 2.

Ecological Reference Worksheet

Author(s) / participant(s): Don Ashby Jr., D'Laynn Bruce, Jim Norris, John Hartung, Jerry Sparks

Contact for lead author : Don Ashby Jr.

Reference site used? Yes/No No

Date: 1/5/2005 **MLRA:** 70 **Ecological Site:** Clayey CP-2 This must be verified based on soils and climate (see Ecological Site Description). Current plant community cannot be used to identify the ecological site.

Indicators: For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above and below average years for <u>each</u> community within the reference state, when appropriate & (3) site data. Continue description on separate sheet.	Indicator Weight
1. Number and extent of rills : None	
2. Presence of water flow patterns: Water flow patterns may be observed in areas where active gully erosion is occurring.	
3. Number and height of erosional pedestals or terracettes: None	
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground) : Bare ground may be present up to 30%. Bare patches should be less than 6 inches in diameter.	
5. Number of gullies and erosion associated with gullies: Due to the clay content of this site gullies may occur. Deep gullies active and historic may be present.	
6. Extent of wind scoured, blowouts and/or depositional areas: None	
7. Amount of litter movement (describe size and distance expected to travel) : Fine to medium (plant material) litter movement 1-3 feet can occur during high intensity, short duration rainfall events.	
8. Soil surface (top few mm) resistance to erosion (stability) values are averages - most sites will show a range of values for both plant canopy and interspaces, if different): Anticipated to be 5-6 at the surface and subsurface in the interspaces and 6 at the surface and subsurface under vegetation.	
9. Soil surface structures and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different) : Soils are Clays and Clay loams, dark red or brown in color with the A horizon 9-12 inches in depth. Soils are moderately deep to deep, well drained with moderately slow permeability.	
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Grasses and Forbs account for 95% of the annual herbaceous production for this site and makes up 35% of the sites composition. Surface runoff is medium, infiltration is slow and water holding capacity is high.	
11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): None (Sod bound Blue grama may be mistaken for compacted soils.	
12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: indicate much greater than (>>) , greater than (>) , and equal to (=) : Warm Season bunch grasses>>>Warm Season rhizome grasses>Forbs(Nightshade, Globemallow, Verbena)>Shrubs(Fourwing Saltbush, Winterfat)	
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence) : Most of the perennial grasses, forbs, shrubs are long lived. Extended drought periods tend to cause high mortality rates in the grass species, with some mortality in the forbs. Shrub and trees mortality can occur in severe, multiple year droughts.	
14. Average percent litter cover (30 %) and depth (1.2 inches). Percent litter and depth will increase with multiple, above average rainfall years.	
15. Expected annual production (this is TOTAL above-ground production, not just forage production): 500 lbs/ac low precip. Years, 1000 lbs/ac in average precip years, 1500 lbs/ac in above average years. Grass/Grasslikes make up to 80% of the total annual production.	
16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "can, and often do , continue to increase regardless of the management of the site and may eventually dominate the site": Mesquite and/or cactus species have the greatest potential for invading this site.	
17. Perennial plant reproductive capability : Weather related and natural disease can result in reduced reproductive capabilities. If mesquite and/or cholla species can dominate the site it can reduce reproductive capabilities of the native grasses and forbs.	

Photograph (s)

MLRA : 70

Date :

Ecological Site : Clayey CP-2

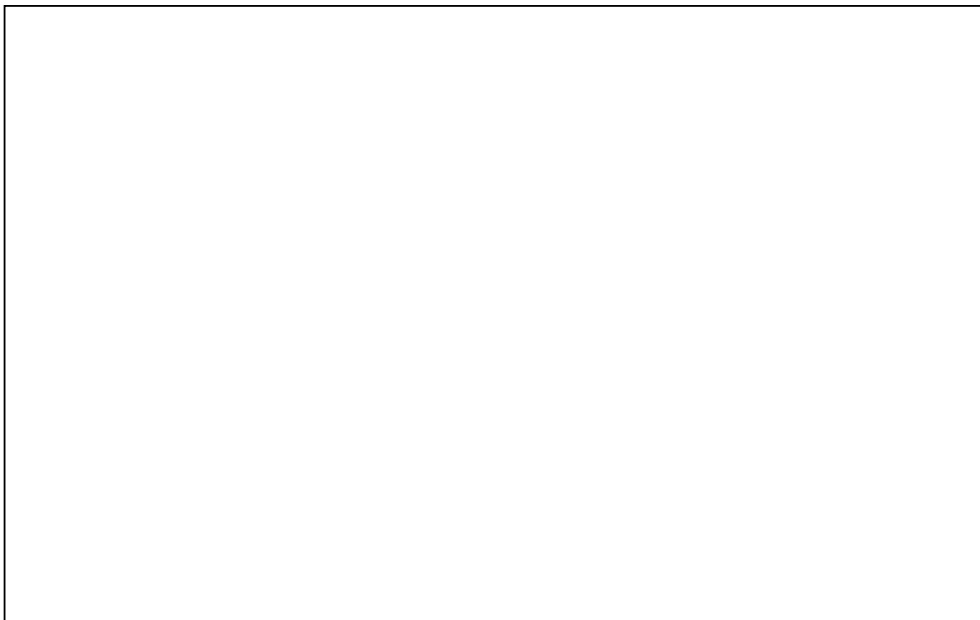


Photo # 1

Comments :

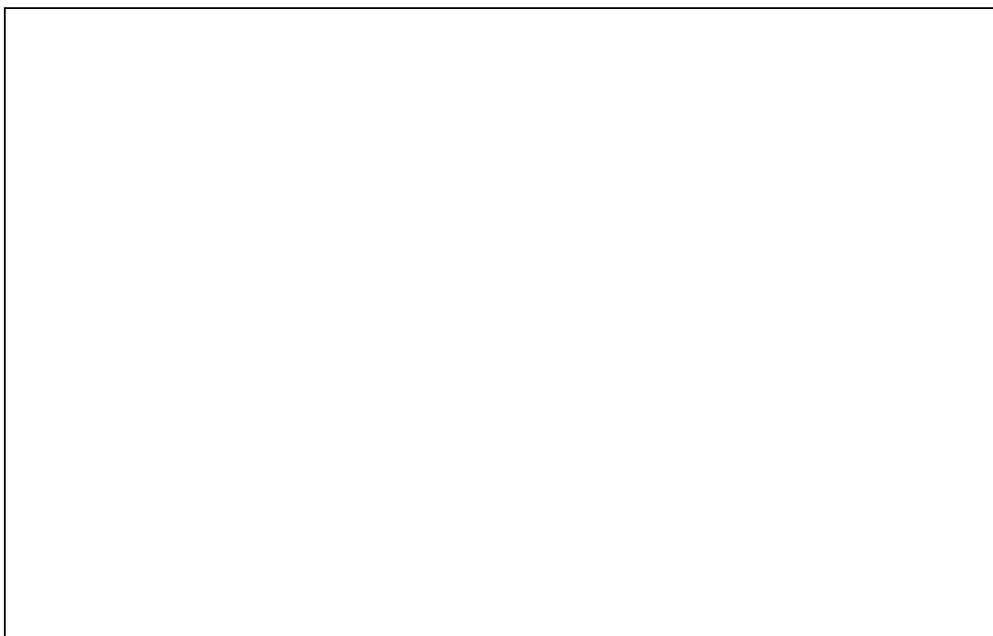


Photo # 2

Comments :

Appendix 4.

Functional / Structural Groups Worksheet

State	<u>NM</u>	Office	<u>Fort Sumner</u>	Ecological Site	<u>Clayey CP-2</u>
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Observers	<u>Don Ashby Jr., D'Llaynn Bruce, Jim Norris, John Hartung, Jerry Sp</u>	Date	<u>1/5/05</u>
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Indicate whether each "structural/functional group" is a Dominant (D)(roughly 40-100% composition), a**Sub-dominant (S)** (roughly 10-40%) composition) a**Minor Component (M)** (roughly 2-5% composition), or a**Trace Component (T)** (<2% composition) based on weight or cover composition in the area of interest (e.g., "Actual ² column) relative to the "Potential ² column derived from information found in the ecological site/description and/or at the ecological reference area.

Biological Crust 3 dominance is evaluated solely **oncover** not composition by weight